

SCR & SER Forest Health Update

Wisconsin DNR, Forest Health Protection Unit

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CONTENTS

Common pine shoot beetle quarantine.....	1
Gypsy moth updates.....	2
Gypsy moth started to hatch.....	2
Gypsy moth quarantine updates	3
Annosum root rot in Jefferson Co.	3
Oak wilt pruning guidelines.....	3
2004 EAB survey summary.....	3
Annosum root rot trial in the Sauk Co. forest	5
Asian longhorned beetle updates	5
Forest health personnel updates	5
What is “invasive”?	6
Contact us	6

About this newsletter

“SCR & SER Forest Health Update” is an informal newsletter created by the Wisconsin DNR, Forest Health Protection Unit. The purpose of this newsletter is to provide foresters in the South Central Region and Southeastern Region with regional up-to-date forest health information. This newsletter will be issued monthly during the growing season and on an irregular basis during winter as topics come up.

We appreciate your comments

Thank you for providing us with your comments on the previous issues of this newsletter. Based on your feedback, we decided to continue to include color photos in our newsletter though we will make special efforts to keep the file size relatively small. If you need a text only version, please let us know. We also continue to welcome your comments/suggestions on this newsletter and your reports on forest health problems you observed in your area.

Attention! Common pine shoot beetle quarantine reminder - Movement of pine products from quarantined counties to non-quarantined counties is not allowed for 3 months (1 April - 30 June)

Wisconsin Counties Infested with Pine Shoot Beetle - 2004



Wisconsin Department of Agriculture, Trade & Consumer Protection

As of April 2005, ten counties are under quarantine in Wisconsin for the common pine shoot beetles (*Tomicus piniperda*). Quarantine counties are Dane, Grant, Green, Jackson, Kenosha, Lafayette, Outagamie, Rock, Sauk, and Walworth Counties. Outagamie County was added just recently as a pine shoot beetle adult was collected from a trap on April 7. A county is designated as quarantined once a beetle is found in the county. The quarantine applies only to *Pinus* spp. Previously, regulated species was expanded to *Picea* spp. and *Abies* spp. However, as more information on host ranges was collected, the WI DATCP decided to apply regulations only on *Pinus* spp.

The following are the regulated items:

- the pine shoot beetle in any living stage
- live or cut plants of *Pinus* spp.
- timber or logs of *Pinus* spp., with bark attached
- ornamental foliage from *Pinus* spp.

The movement of the regulated nursery stock or Christmas trees from quarantined to non-quarantined counties is prohibited unless they are inspected and certified by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) or USDA Animal and Plant Health Inspection Service (APHIS) through growing season field inspections. Receiving mills (saw and pulp) in non-quarantined counties are not allowed to receive pine logs from regulated areas from April 1 to June 30, unless they have a compliance agreement to process logs within 12 hours. Outside of that time frame, mills must process the regulated logs by April of the following season or after June 30. If you plan to set up a timber sale of *Pinus* spp. in quarantined areas, make sure to avoid the transportation of logs to mills in non-quarantined counties during the restrictive period, or contact the receiving mill to see if they have a compliance agreement to process Pine products within 12 hours.

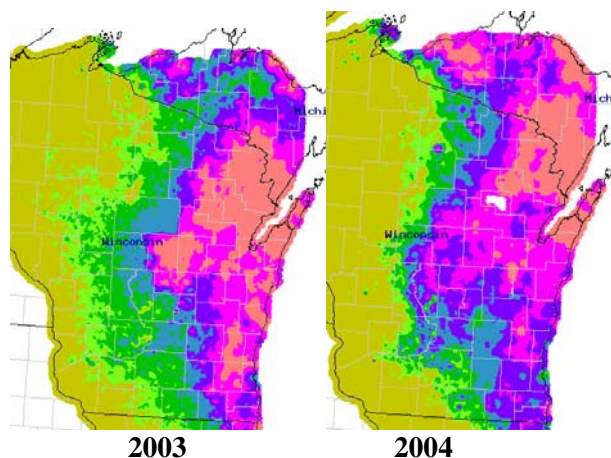
For more information about common pine shoot beetle quarantine regulations and infested areas, please contact the Wisconsin DATCP at 608-224-4573 (transportation of logs within Wisconsin) or USDA APHIS Plant Protection & Quarantine at 608-231-9545 (transportation of logs to out-of-state).

Gypsy moth updates

By Andrea Diss and Mark Guthmillar

In late 2003, male moth trapping results and egg mass surveys indicated the likelihood of extensive outbreaks and defoliation in the summer of 2004 in northeastern, southeastern and central Wisconsin. Responding to this threat, communities in 20 counties applied to the suppression program. In May and early June, 51,450 acres in 311 blocks were sprayed by small plane: 46,225 acres were treated with the *Bacillus thuringiensis kurstaki* based insecticide Foray and 5,225 acres were treated with the viral insecticide Gypchek. Treatments were successful on all blocks. This success was aided by weather in May and June that was very unfavorable for the gypsy moth. Heavy and frequent storms stressed young caterpillars and encouraged mortality from *Entomophaga maimaiga* and Nucleopolyhedrosis virus. These mortality factors resulted in great decreases in the population across the state. Only 20 acres were defoliated in 2004, down from 65,000 acres in 2003. This decline in the population is reflected in the male moth trapping results for 2004. In 2003, eastern and central counties had large areas where the number of males per trap were in excess of 300 (orange), indicative of a large population which could cause defoliation the following spring. In 2004, however, the area with trap catches this high had shrunk considerably. For 2005, we are expecting some defoliation in Marinette county and upper Oconto county, possibly also in the lower Door Peninsula in favored hosts and in the Fox River Valley cities. Scattered defoliation is possible where male moth counts are above 100 (pink) if weather and hosts are favorable.

Male Moth Trapping Results, 2003 and 2004



Orange = >300 moths/trap, expect defoliation of favored hosts
Pink = 100-300 moths/trap, defoliation possible in favorable sites
Blues = 10-100 moth/trap, gypsy moth established but not yet a problem
Greens and yellow = 1-10 moths/trap, gypsy moth not yet established

Gypsy moths started to hatch!



With the mild weather in mid April, gypsy moth egg masses were observed hatching in Dane County on Friday, April 22nd, a bit ahead of normal. Watch for upcoming press releases to narrow down the timing of treatments as we approach the spray season.

For maps of this years spray blocks go to:

DNR Suppression- http://dnr.wi.gov/org/land/forestry/fh/GM/spray_areas/index.html

DATCP Slow the Spread (STS)-

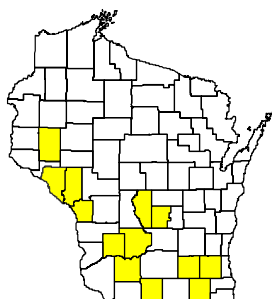
http://datcp.state.wi.us/arm/environment/insects/gypsy-moth/map_index.html

Gypsy moth quarantine updates - gypsy moth quarantine adds Sauk and Juneau counties



The gypsy moth is expanding westward in Wisconsin and two new counties were added to the gypsy moth quarantine this year. Sauk and Juneau counties are now considered "generally infested" and need to comply with the state and federal gypsy moth quarantine. The quarantine regulates movement of forest products, nursery stock, Christmas trees, as well as personal property associated with household relocation. For specific information regarding this quarantine contact Bob Dahl, with Department of Agriculture at 608-224-4573.

Annosum root rot found in Jefferson County



Counties where Annosum root rot is confirmed

Thanks to Randy Stampfl's eagle eyes, Annosum root rot was found in a red pine-walnut plantation near the border of Jefferson and Waukesha counties (Sec.24, T8N, R16E) in 2004. With this new finding, Annosum root rot is found in 13 counties in Wisconsin (Adams, Buffalo, Dunn, Green, Iowa, Jefferson, La Crosse, Marquette, Richland, Sauk, Trempealeau, Walworth, and Waukesha Counties). The fungus, *Heterobasidion annosum*, causes a root and butt rot of conifers and often kills infected trees. Annosum root rot was first identified in Wisconsin in 1993. For more information about Annosum root rot, please visit the DNR website at

<http://dnr.wi.gov/org/land/Forestry/Fh/fhissues/annosum.htm>.

Stop pruning oak now!

This spring, due to the warm weather, fungal mats and beetles that transmit the disease were detected to be active in the Twin Cities by early April. It is time to stop pruning or harvesting oak trees. The DNR guidelines state that harvesting, pruning or wounding oak trees should be avoided from bud swell up to two or three weeks past full leaf development (generally April 15 to July 1). This is the highest risk period for overland spread of oak wilt. Although the risk of oak wilt spread is low after July, oak wilt could spread after July 1. On valuable trees, no pruning period may be extended from April 1 to October 1 to take a more cautious approach. If you have to prune oak during this critical period, you should apply wound dressing on the wound surface as soon as the wound is created.

Oak wilt is a fungal disease, and commonly found in the southern 2/3 of Wisconsin. Every year, this disease kills many oak trees in Wisconsin. Oak wilt can spread from a diseased tree to a healthy tree through connected root system and through insects. Very small sap-feeding beetles transport fungal spores by landing on fungal mats full of oak wilt spores, then later on a fresh wound of a healthy oak tree. This is how a new oak wilt pocket starts in a location where oak wilt didn't exist previously. For more information on oak wilt, please visit <http://cecommerce.uwex.edu/pdfs/G3590.PDF>.



2004 Emerald Ash Borer and Ash health Visual Examinations Summary by Renee Pinski

During the summer of 2004 we conducted a visual survey of Wisconsin's ash resource in campgrounds throughout 17 state parks and one state forest across the SER and SCR. The survey objectives were 1) to detect any emerald ash borer infestations and 2) to determine the overall health status of the ash resource.

Emerald ash borer larvae feed in the cambium region, between the bark and the wood, creating serpentine galleries. These galleries eventually girdle and kill the tree by depriving the crown of water and nutrients. Transmission of this pest is accelerated by the inadvertent transportation of larvae in logs, firewood and nursery stock. We focused our survey efforts towards ash trees found in campgrounds because the risk of emerald ash borer infestation is higher where firewood transportation occurs.

Data were collected from a maximum of two ash trees per campsite and included a visual inspection of canopy health (branch dieback, yellowing, epicormic sprouting), signs of emerald ash borer (larvae, adults, bark cracks, serpentine galleries, D-shaped exit holes) and signs of other ash pests and diseases.

No emerald ash borer infestations were detected during visual surveys. Overall, 2373 trees were surveyed across the SER and SCR. The overall health status of the ash resource is generally good, with 87% of the trees surveyed being apparently healthy. The most common health issues observed were minor disorders that included a variety of pathogens, mites and insects, environmental factors and mechanical wounding. These disorders were seemingly widespread across all survey sites. Light to moderate infestations of the foliar disease anthracnose (*Gnomoniella fraxini*) was the most prevalent health issue, affecting 6% of all trees surveyed. Common insect and mite pests included light infestations of the ash bark beetle (*Hylesinus* sp.) and ashleaf gall mite (*Aceria chondriphora*). More serious pests observed included the redheaded ash borer (*Neoclytus acuminatus*) a long-horned beetle, and the ash borer (*Podosesia syringae*) a clearwing moth. However, these pests occurred in only 0.6% of the trees surveyed. Numerous seasons of summer drought prior to 2004 impacted overall ash tree health across study sites. Drought stress occurred on 4% of ash trees, producing thin crowns with tufted foliage. Lastly, tree vandalism was prevalent throughout the state parks, affecting 18% of ash trees surveyed. Tree wounding is suspected to have been human induced by such objects as hatchets, nails, ropes and automobiles/campers on the tree bole.

Significant ash decline was observed at Wyalusing and Nelson Dewey State Parks. The suspected causal agent is a phytoplasma known as ash yellows. This diagnosis was based on the distinctive brooms that were evident on a few of the ash trees. Possible testing is to occur this spring for a positive identification.

This year, additional visual EAB detection surveys will be conducted with the focus on private campgrounds in northeastern Wisconsin, selected riverway properties, and selected communities in eastern Wisconsin.

Additional information on the visual EAB detection survey that occurred statewide during 2004 can be viewed as a PDF file and downloaded from the forest health emerald ash borer web page at <http://dnr.wi.gov/org/land/Forestry/FH/Ash/index.html>. The file is located in the section titled *Results of 2004 emerald ash borer detection surveys*.

2004 Emerald Ash Borer Trap tree Surveys Summary

by Mark Guthmiller



Julie Peltier collecting insect specimens

A total of twenty-four trap trees were installed last spring in 10 state forest campgrounds, 1 county campground, and 1 boat landing to monitor for the presence of emerald ash borer and other ash boring insects. Traps were checked every other week from the beginning of June through September. Trap trees were paired at each location. This fall one of the paired trees at each location was cut down and debarked to check for wood boring insects. The remaining trees will be cut down sometime next year. Insects were collected from traps and kept in vials with rubbing alcohol.

There was no confirmation of emerald ash borer at any of the traps during time of collection or debarking of trees. Additional wood boring insects are being processed for identification.

Visual surveys of each of the trap tree sites were conducted during the summer. In addition, the Manitowoc Ferry park area was also surveyed. No evidence of emerald ash borer was detected during these surveys. A number of declining ash were noted at the entrance area to Long Lake Campground in the Northern Unit of the Kettle Moraine State Forest and at a picnic area in the Bois Brule campground of the Brule River State Forest. Ash yellows was suspected at the

Long Lake site and possibly weather-related issues at the Bois Brule site. The Point Beach State Forest campground was also experiencing some ash dieback and mortality in the low areas and may be due to water level and root rot problems. Additional investigations may be warranted at these sites.

Annosum Root Rot Planting Trial at the Sauk Co. Forest

By Mark Guthmiller

In November of 2003 approximately 13 acres of the Sauk County Forest was clearcut as a salvage operation due to extensive Annosum root rot (*Heterobasidion annosum*) infections in this area. A management plan for this area has been developed involving prescribed burning to reduce spore load and setting up a planting trial. The clearcut has been divided up into "burn and no burn" sections. Within these sections numerous tree species, both hardwoods and conifers, will be planted to evaluate the long-term survival where Annosum root rot has been found. Initial site prep and brush clearing was completed and an attempt at a fall burn was conducted with poor results. In addition to reforesting the clearcut, there will be higher density short-term plots established within this area to monitor seedling survival. Planting is scheduled for spring of 2005.

Asian longhorned beetle updates

The most recent Asian Longhorned Beetle (ALB) infestation detected in the United States last summer was found to be genetically different from other sources. Due to the proximity of the infestation to the New York City and Jersey City infestation, the finding in Carteret, New Jersey, had been previously assumed to have started from the movement of infested wood. However results from the genetic analysis of adult beetles suspect that the latest infestation started separately from nearby infestation sites. It is believed that the infestation in Carteret is at least six years old.

Asian longhorned beetles are exotic woodborers that are native to Asia. Since initial finding in New York in 1996, the infestations by this insect have been found in New York, Chicago, and New Jersey. In New York, USDA APHIS plans to treat approximately 78,000 trees susceptible to the ALB this spring. An insecticide imidacloprid will be used to prevent further infestation of this pest. No additional infested trees were found in Chicago last year. On April 21, 2005, ALB quarantine regulations were lifted for most of the previously infested areas in Chicago.

Personnel updates – 2 new faces in the gypsy moth program



The gypsy moth program is pleased to announce the appointment of Mark Guthmiller as our new regional Gypsy Moth Suppression Coordinator for SER and SCR. He started his new position effective April 4. His office is located in SCR Headquarters in Fitchburg. Many of you know Mark from his previous statewide work concerning other forest health issues. In his new position, Mark will be working across both the SCR and SER. Mark has over 10 years of forest health management experience working as a Plant Pest Disease Specialist, Senior Microbiologist and Forest Health Technician conducting statewide and regional field surveys, fielding landowner calls and assisting with laboratory diagnosis of forest insects and diseases. He served as a Regional Gypsy Moth Suppression Coordinator from September 2001 to September 2003 coordinating gypsy moth suppression spray programs working with counties, municipalities and landowners.

As you may know, Kristina Skowronski has been working as an assistant with the gypsy moth suppression program since last November. Many of you may be familiar with Kristina through her LTE positions assisting the urban foresters in Milwaukee and Fitchburg. Currently she works half time with her urban forestry position and another half time with gypsy moth management in the SER.

Native to Southeast Wisconsin, Kristina has been working with the urban forestry program in SER and SCR since graduating from Stevens Point in May of 2003. She has a bachelor's degree in both Urban Forestry and Forest Management. Outside of work, she loves the outdoors. She enjoys duck, deer and turkey hunting as well as fishing.



Can I ask a stupid question?

You may have a burning question to ask, but hesitate to do so because you are afraid that the question sounds so basic or stupid that they may laugh at you. Or you may be using a word every day, but you are not completely sure if you are using it in a right way. No sleepless nights anymore. Here, somebody else will ask a question for you, and you can hear expert's answers for it.

This issue's question is - What exactly is "invasive"? Recently we have been hearing the word "invasive" quite often. Most of the "invasive" talks are referred to "exotics" that came from Asia or Europe. Is "invasive" synonym to "exotic"? Is there a "native-invasive" pest or plant? Here are the answers from the forest health coordinator, Jane Cummings-Carlson. She has been a member of the WI DNR Invasive Committee and working on developing a departmental structure to deal with invasive species issues.

Q. What exactly is "invasive"?

A. According to the definition that the DNR invasives committee agreed to use, invasive species is a species that is not native to an ecosystem and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Q. Is "invasive" synonym to "exotic"?

A. As you can see from the definition, "invasive" species does not necessarily have to be exotic.

Q. Based on the DNR invasives committee definition, I would say, pests like the two-lined chestnut borer, the jack pine budworm, and the forest tent caterpillars are not "invasive" because they are native to an ecosystem though they can cause economic harm. Right?

A. That's right.

Q. How about Annosum root rot? It's native to North America, but new in our ecosystem.... How about oak wilt in northern Wisconsin?

A. Annosum and oak wilt could be considered invasive, if we consider anything new to an ecosystem at a small scale- say a county- invasive. If our scale is large at the state level, I would say they are not invasive. This is indeed philosophical and I don't know if we'll ever need to fit these pests into the definition. For now, I think it is best not to try and put everything into invasive or not invasive.

Thank you for answering these questions, Jane!

Please report to us...

We appreciate reports of forest health problems in your areas. Currently, there is no regional forest health specialist in SCR or SER. Until the situation changes, please contact the following staff for regional forest health problems/questions. Thank you.

For general forest health issues

Jane Cummings-Carlson (northern part of SER) 608-275-3273

Kyoko Scanlon (southern part of SER, and SCR) 608-275-3275

For gypsy moth

Andrea Diss (Statewide issues) 608-264-9247

Mark Guthmiller (SCR/SER) 608-275-3223

Kristina Skowronski (SER) 414-263-8744(gypsy moth) or 414-263-8496(urban forestry)

Emerald ash borer hotline 1-800-462-2803

Gypsy moth hotline 1-800-642-MOTH

Forest Health web site: <http://www.dnr.state.wi.us/org/land/forestry/FH/>

Gypsy Moth web site: <http://www.gypsymoth.wi.gov>